# JOURNAL

## OF AMERICAN INSURANCE

JULY, 1960 Vol. 36—No. 7

Today's 'Covered Wagon' Dwellers

Tested Methods for Tough Fires

Who and What Make Auto Accidents?

Newest Thing on Radio: Business

Minutemen for Mountain Rescues

Preview of the Air-Car Era

# JOURNAL
## OF AMERICAN INSURANCE

JULY, 1960 Vol. 36—No. 7

1 *Home Is Where They Park It*

4 *Tough Fires Are Their Business*

7 *Maybe, Weather Made to Order*

11 *Probing the 'Outer Space' of Auto Accidents*

12 *Wanderlust Works Wonders*

16 *Our Irradiating Industries*

18 *Liquid Lightning for Space Leaps*

20 *Annals—Independence Day*

21 *Glass Eye With a Mission*

25 *Big Boom in Business Radio*

28 *Ready and Able to Rescue*

30 *Free as a Feather*

33 *Close-Ups of Our Commissioners—Smith*

FRONT COVER—*The Declaration Committee*
*Reproduced from collections of Library of Congress*

BACK COVER—*Honolulu, 50th State's Capital*
*Pan American Airways*


## OUR COVERS

HISTORY's most famous insurance pact, underwriting the freedom and independence of the Nation, was composed by the five men in the scene on our front cover. They are the Congress-appointed committee that drafted the Declaration of Independence which was adopted at midday July 4, 1776, declaring the 13 colonies free and independent states under the name of the United States of America.

From the left, they are Thomas Jefferson, Virginia; Roger Sherman, Connecticut; Benjamin Franklin, Pennsylvania; Robert R. Livingston, New York, and John Adams, Massachusetts.

Jefferson had been entrusted with the writing. He, with Franklin and Adams, revised the first draft. Congress made further changes. As then adopted, the document is enshrined in the National Archives, Washington.

This Independence Day the honors focus on Honolulu, Hawaii (back cover), capital of the Union's 50th and newest state. There, on July 4, when the new 50-star flag becomes official, a new-issue stamp with the design of the banner goes on sale commemorating the occasion. ⊙


*Journal of American Insurance* is published monthly by the American Mutual Insurance Alliance, 20 N. Wacker Drive, Chicago 6, Ill.

NEWELL R. JOHNSON, *General Manager*
FREDERICK J. KEILHOLZ, *Editor*
L. A. FITZGERALD, *Assistant Editor*
DONALD W. SEGRAVES
RICHARD C. BJORKLUND
WILLIAM M. SCHIBUR



Copyright 1960 by American Mutual Insurance Alliance, Chicago. For permission to reproduce material from the Journal and for information about reprints write to *Journal of American Insurance*, Editorial Offices, 20 North Wacker Drive, Chicago 6, Illinois.

Columns of the *Journal of American Insurance* are open to public-interest matters directly or indirectly related to insurance, but opinions expressed are not necessarily endorsed by the American Mutual Insurance Alliance.

Travel trailers are popular on the West Coast for vacations, are not intended for permanent living. They're only half as long as full-sized mobile homes, cost about one-third as much.

# HOME IS WHERE THEY PARK IT

*These versatile trailers—*
*big, sleek and fully insured—*
*now house*
*3½ million Americans.*

LIKE THE COVERED WAGONS that crossed the plains, houses on wheels are helping pioneer a new way of life for a growing tribe of adventuresome Americans.

Nearly 1½ million of them now provide homes for 3½ million people—enough to form the nation's third largest city if gathered all together. As it is, they are scattered throughout every state in the union, clustered in 14,000 mobile home parks, moored in fleets near the great construction sites and military camps, or tucked away in back yards or on some farmer's wood lot.

Their inhabitants, for the most part, are willing migrants—people who have deliberately arranged their lives so they will be free to travel wherever there is money to be made or interesting places to be enjoyed. Some are retired

About one out of five mobile home owners is a serviceman. For many, it's the only practical way to own a home, with frequent changes in assignment.

## *Home Is Where They Park It*

people who like to follow the sun, others are young married couples just getting a start.

About half of them are skilled workers and professional people, mostly in the construction trades. They are the engineers, the earth movers, the electricians, the carpenters, the men who walk the high steel, the crane operators and pipe fitters who lay the nation's pipelines. They go where their jobs lead them, from an atomic energy plant in Ohio to a hydroelectric dam in Montana; from a pipeline in Texas to an oil refinery in Venezuela, taking along their families and all the comforts of home. They earn, on the average, about $1,000 more per year than their stay-at-home brothers with the same skills.

Even so, their sedentary neighbors regard mobile home dwellers with a combination of curiosity and pity and wonder if life behind those picture windows and brightly-painted walls isn't somehow cramped and drab. Many of them have memories of the jerry-built tin-and-plywood trailers of the 1930's, which earned early trailerites the derisive title of "Tin Can Tourists." Even more are familiar with the little silver trailers that swarmed like beetles around defense plants during World War II, then shifted to college campuses when thousands of returning veterans overflowed the halls of ivy.

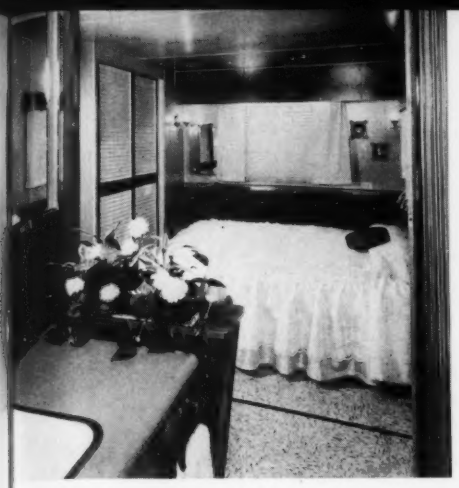
Today's mobile homes bear little resemblance to those makeshift quarters, however. In the past few years, trailer dwellers have come more and more to regard their abodes as permanent housing, and to demand all the gadgetry of conventional homes. The nation's 380 mobile home manufacturers were only too happy to oblige.

Since 1954, mobile homes have expanded from 8 to 10 feet wide, and have grown in length from 25 feet to 35, 50 and even 60 feet for some of the luxury, three-bedroom models. They sleep from two to six people comfortably and come completely equipped with sofas, chairs, beds, rugs, lamps, cabinets, worktables, full-sized stoves and refrigerators, bathtubs, and even garbage disposal units, dishwashers, TV sets and air conditioning in some models.

Mobile homes cost from $3,500 to $10,000 or more, and about 80 per cent of them are financed on long-term notes. Payments usually run from $80 to $120 a month, and park rentals vary from $20 to $120 for a few luxury sites. The average is about $30.

Insurance coverages for these rolling homes have grown with the industry and now provide protection as complete as that available for conventional houses, plus some extra provisions borrowed from auto policies to protect the home while on the road. At a cost of about $1 per $100 of retail value, the mobile home buyer can insure against fire, lightning, windstorm, hail, earthquake, explosion, civil riot, falling aircraft, floods, vandalism, glass breakage, and even extra expenses incurred if the home is damaged beyond use. Collision coverage also is available, either on a 30, 60 or 90 day basis or year-round.

Surrounded by all these creature-comforts and financial assurances, today's mobile homeowner is a solid citizen in any community. The old stigmas attached to trailer living are rapidly dying out. As one family of four put it, "We feel that we have every convenience and comfort that could be afforded by conventional housing, plus freedom from heavy mortgage and freedom of movement. For us, it's the only life." ⊙

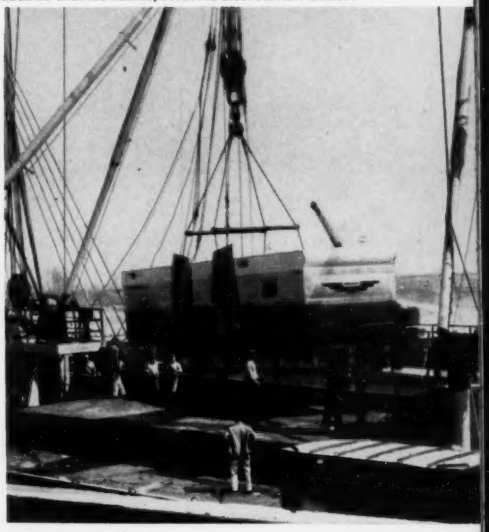


Mobile homes sleep up to six persons, have full-sized beds, dressers, ample closet space, even air conditioning.

No rolling stones, George and Evelyn Bockman have lived in the same mobile home park in Cleveland for nine years.

*Mobile Homes Manufacturers Association Photos*

Emergency homes for Kansas City flood victims head west from Chicago at the request of federal housing officials.



Insurance covers mishaps in transporting mobile homes by land or sea. These are for U.S. oil workers in Venezuela.

↓ Many trailer parks cater to retired persons and other permanent residents by offering full community services.

→

Laying hose by helicopter is now standard practice in the mountainous and built-up areas that must be protected from tough fires by the Los Angeles County Department.

This method speeds up fire fighting on rough and uneven terrain. A reel of hose is placed on a bulldozer which then cuts its own fire line and lays hose at same time.

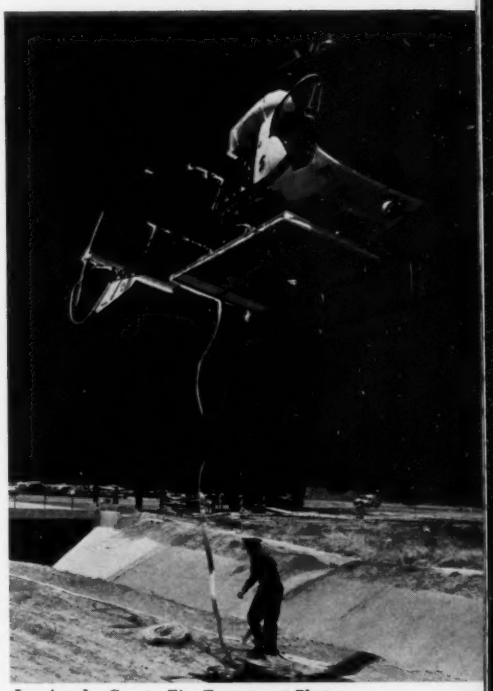
→

The California Division of Forestry, which provides fire protection on about 11 million acres, uses this method of loading hose for fastest laying over rough terrain.

# TOUGH FIRES

## ARE THEIR BUSINESS

*Updated methods, as practiced by Californians, are commended to many unprotected communities.*



*Los Angeles County Fire Department Photos*

For hard-to-reach fires, the helicopter used by the Los Angeles County Fire Department has a rack from which 1,000 feet of 1½-inch hose can be laid fast regardless of how rough the terrain.

IT WAS A CALIFORNIA POET of 1895 who "never saw a purple cow." But Californians are now seeing something equally as offbeat, and the rest of the country may be treated to it, too: luminous orange fire apparatus instead of the traditional red.

One piece of apparatus in the Los Angeles County Fire Department has been painted bright luminous orange to test whether this color will stand out stronger in today's traffic. It is believed, too, that the apparatus will be more readily identifiable from the air. The experiment will be carried on for one year.

Such new ideas in fire fighting have been pioneered for years by California, under compulsion of the fact that the state is plagued with some of the nation's worst fires. The sweeping fire which devastated San Francisco following the earthquake of April 18, 1906, capped one of the most spectacular disasters in U. S. history. To bring the record up to date, the largest single industrial plant fire of the past year was the $2,350,000 fire at a Fremont, California, cannery on October 17, 1959. And of 22 major U. S. forest fires last year, 15 occurred in California.

Laying hose by helicopter and using the helicopter for spot water drops have become standard practice in the mountainous and built-up areas that the Los Angeles County Fire Department has to protect. The department and the California Division of Forestry, in cooperation with other agencies, also have experimented to perfect mechanical means of laying hose over rough and uneven terrain with a bulldozer.

Another innovation is the laying of hose by the doughnut-roll method. All hose is rolled doughnut fashion, coupled and then slipped over an upright; a truck or tractor then starts for the fire and lays hose as it goes. If the situation calls for the line to be laid by hand, the rolls are merely lifted off the uprights.

California has been making this kind of fire-fighting history ever since Stanislaus County

## *Tough Fires Are Their Business*

(Modesto) came up with the world's first piece of motorized fire equipment with water supply. This forerunner of the present-day rural fire truck was built in Oakdale in 1917 by O. Z. Bailey, chief of the Oakdale department. A few years later, the late Glen Griswold, then battalion chief of the Los Angeles County department, perfected a combination fog nozzle first used on oil fires and later on watershed and structural fires. A tanker of 4,000 gallons capacity with a pump connected to an auxiliary motor was placed in service by the Kern County department in 1939.

During the past several years, more counties have been equipping their departments with huge tankers and trailers. These can carry up to 4,000 gallons of water and can be used either directly on a fire or to supply water to smaller units.

Many municipal districts have put tank trucks or water wagons in service in the guise of squad cars, highly effective for coping with a fire in its earliest stages.

In the pioneer county of Stanislaus, there are now 47 pieces of rural equipment which carry from 350 to 2,000 gallons of water. Each unit has a 350-gallon-per-minute front-mount pump and a 35-gallon-per-minute high-pressure unit with an auxiliary motor. The 1,000- and 2,000-gallon tankers have a 25-foot special discharge hose. Permanently connected to each piece of equipment is a 1½-inch "jump line" of hose varying from 100 to 200 feet for fast attack.

Many California fire districts and some municipal departments are now using 1-inch cotton-jacket rubber-lined hose. It has been a real boon to fire fighting on watershed fires of major proportions where it is necessary to lay long hose lines through rough terrain.

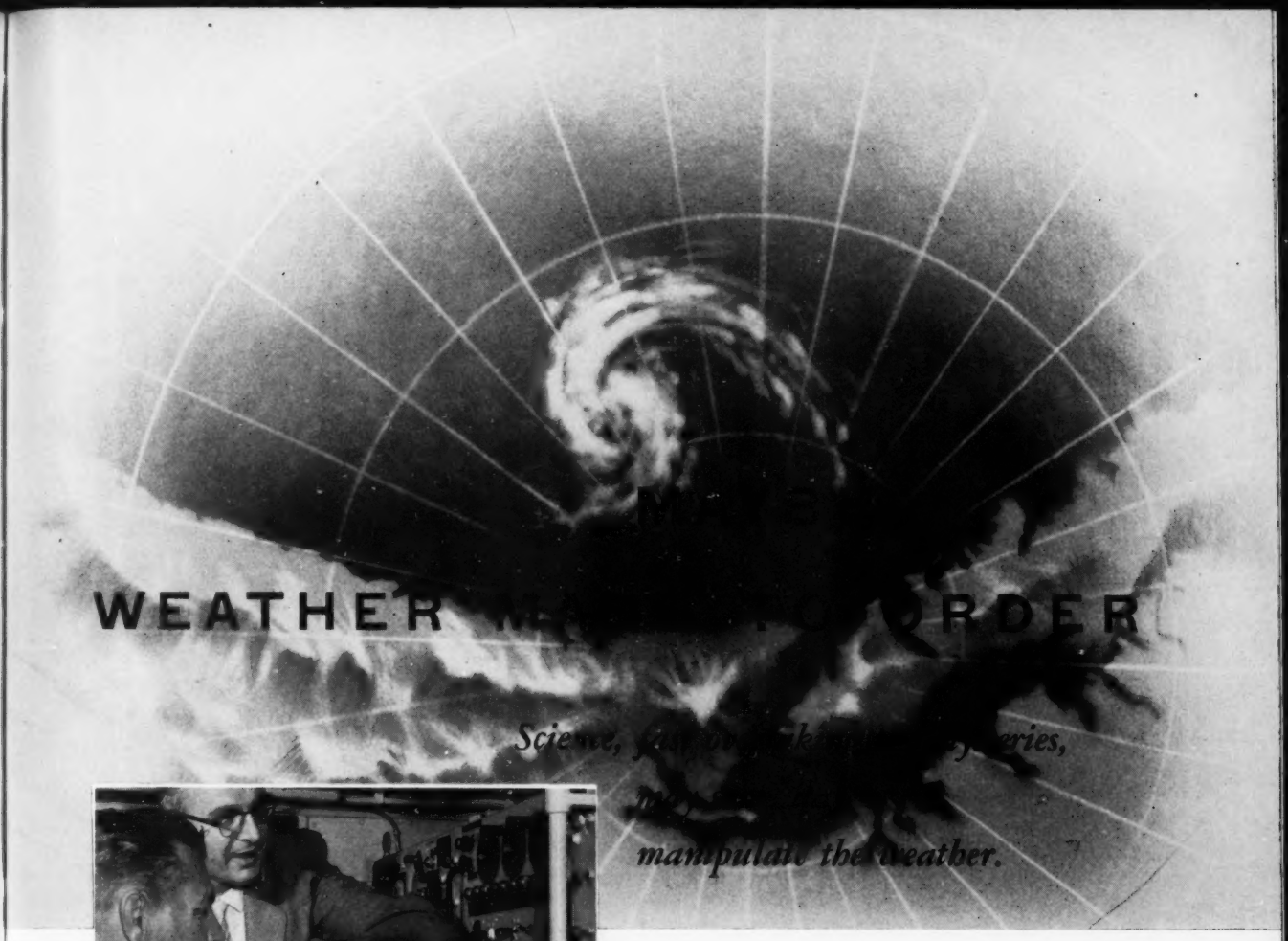
California firemen have learned by tough experience and thorough training how best to use all this modern equipment. For example, on a grain, grass or flatland fire where more than one piece of equipment responds, the first one on the scene is placed on the hot side of the fire. All training courses are more or less standardized, having been developed by the State Fire Training Program to fit the largest departments. This program is then tailored to fit the smaller departments, with special adaptations for anything peculiar to the area.

For its 100 million acres of area, California has 463 fire protection districts organized under provisions of the Health and Safety Code. In addition, there are 300 or more incorporated municipalities which could be classed as rural. All of the rural departments are manned in one of three ways—full-paid personnel, part-paid and call, and straight volunteer. Fire protection is provided on approximately 11 million acres of rural and agricultural area by the California Division of Forestry under contractual agreement with numerous rural departments or fire protection districts.

Along with the pioneering of advanced fire-fighting methods, a continual program of fire prevention has been carried on by most of the California departments.

What's regrettable about the California system is that too few states have anything to match it. In one of the most recent surveys, by Wayne C. Jenkins, chief, Fire Prevention Bureau, Office of Ohio State Fire Marshal, 30 states showed up without any type of program to encourage the development of rural fire protection and prevention on a state-wide scale. Ohio happens to be one of the best-protected states, along with California and 9 or 10 others. They can show the laggard states a lot of things to their advantage, including "purple-cow" luminous orange apparatus. ⊙

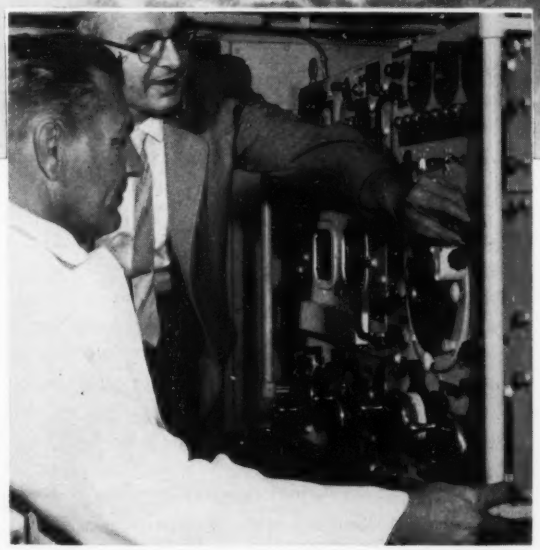
This is today's modern type of motorized fire equipment with water supply. California introduced the world's first one in 1917. Its capacity is 2,500 gallons, with pressure pump and 4,400 feet of hose.



# WEATHER [illegible] ORDER

*Scien[illegible]eries,*

*manipulate the weather.*



Radar is the new Zanoniesque tool in weather forecasting and control, and M. G. H. Ligda *(right)* and his associates at Stanford Research Institute are investigating it with highly promising progress. Storms such as shown above, for example, have not appeared on weather maps because their small size has not been detected. But radar discovers them.

SIXTY-SEVEN JULYS AGO, a good train dispatcher could have made weather-forecasting history by flashing word down the line ahead of one of the worst tornadoes ever to hit the Middle West. But there was no telegraph key and no dispatcher, much less any radio, television or radar. Iowans are still talking about the deaths and destruction in that Pomeroy storm.

Sixty-seven Julys hence—probably sooner than that—weathermen hope to spot storm centers 8,000 miles away and, what's more, control the weather. Weather modification already is possible with the knowledge at hand. It is only a matter of time until methods are perfected. Within 50 years or so, weather and climate control will be possible, depending on how much is spent for the necessary research. Hail-suppression, for example, will become a reality in the foreseeable future as research perfects the methods.

## *Weather Made To Order*

All that could be done when that historic tornado swept in on the Pomeroy area in the late afternoon of July 6, 1893, was take a quick look and head for the storm cellar. Forty-eight were killed; only 21 families in the town of 1,000 population had no dead or injured. Twenty blocks of the town were swept clean of buildings; 80 per cent of the residences were destroyed or so badly damaged they could no longer be used.

Post-storm historians said, "Making due allowance for the variation in timepieces, the storm must have occupied an hour and 40 minutes in traveling 50 miles, making about the usual speed of an express train. Evidently the tornado could have been handled or scheduled quite easily by a good train dispatcher, and people in the towns along its line could have been warned to sidetrack before it reached their stations.

"In this," said the Pomeroy historians, "there is at least a suggestion of the possibility of establishing a system of warning whereby lives might be saved." They were bespeaking what 1960 beholds.

Now, with the advent of air navigation, weather has become a national asset. It must be harnessed if for no other reason than to satisfy the requirement of all the users of air space. And, when it is harnessed, the boon to the insurance industry and the public in protecting the value of lives and property will mean incalculable millions of dollars.

### Radar Finds Disturbances Hitherto Unknown

Radar is the new Jules Verne tool in the weather-forecasting and control science. It came into this use by good fortune during World War II. But already it has done things which far transcend anything even a heroic train dispatcher could have brought off during the Pomeroy disaster. One example comes from a group of radar picket ships stationed off the West Coast of the U. S. for observations by aerophysicists at Stanford Research Institute. By this means there has been discovered a group of small, intense, circular storms resembling hurricanes. Apparently, radar is the only hope in detecting such disturbances, because heretofore they have not appeared on weather maps.

By the fall of this year, the largest radar antenna in the U. S. will be yielding more knowledge about the earth's atmosphere and beyond. This is the parabolic, metal-grid dish 150 feet in diameter being erected on a hill overlooking the Stanford University campus. Its million-watt radio transmitter will be one of the most powerful operating in its megacycle range.

Another of the newer types of radar in meteorology has been installed in the Oklahoma City headquarters of the three-year research project which the U. S. Weather Bureau launched this spring in the heart of the tornado country.

What radar cannot scan will be probed in this project by means of rockets, each fitted to carry a camera 180,000 feet high for photographing the storm structure from above.

For those weather breeders and beacons which may escape radar and rockets, there are now such sleuths as the TIROS satellite launched by the U. S. on April 1, 1960. While TIROS has a 50-year life expectancy, other man-made weather moons are being planned.

### Speedy Machines Now Dispatch Information

What radar and other marvels are doing in revealing deeply hidden secrets of weather is matched by what lightning-fast machines are doing in processing and transmitting the information. Some scientists estimate it would take 60,000 men using pencil-and-paper arithmetic to keep up with the weather as is now done by one electronic data-processing machine. It is capable of absorbing astounding amounts of atmospheric information and of solving complex mathematical equations in minutes. As for speed of transmission, the historians who mused about the possibilities of train-dispatcher service in the Pomeroy storm never even dreamed of ultra high-speed Teletype equipment such as the Federal Aviation Agency is now using to flash out 600 words a minute.

Armed with carefully gathered information, one scientist has even made bold to predict, for the first time, the monthly rainfall through 1967 for 32 cities of the U. S. He is Dr. Charles G. Abbot, secretary of the Smithsonian Institution from 1928 to 1944 and, since retirement, research associate. In this case, use of high-speed computers made it possible to extract and utilize basic information from about 7,000 rainfall tables going back to 1870. Dr. Abbot's Smithsonian publication, *A Long-Range Forecast of United States Precipitation*, was a weather-news sensation of the 1960 Spring.

Advance warning and maybe even control of storms such as the Pomeroy tornado which hit this schoolhouse on July 6, 1893, are a challenge weather scientists are tackling with increasing knowledge and better tools.

This is all that was left of Pomeroy's '93 Immanuel Lutheran Church. Eighty per cent of the town's residences were destroyed or damaged beyond use. The bell now hangs in the new brick church, the third on site.

Pomeroy can still testify that modern weathermen are grappling with a fierce adversary in trying to moderate storms. Here, now known as the Allard home, a man blew in the upstairs window. Three other persons perished.

## *Weather Made To Order*

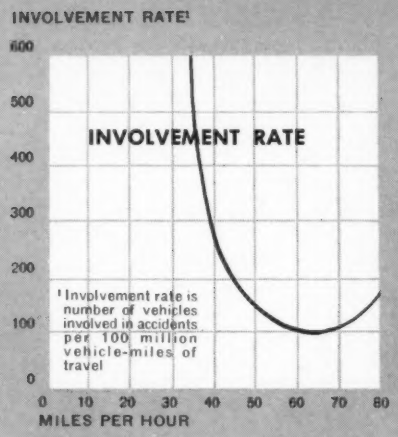
In another recent Smithsonian Institution report, Dr. Roger Revelle, director of Scripps Institution of Oceanography, La Jolla, California, predicts that promising methods for control of weather and climate will be found with the help of the greater understanding which is now piling up. The nature of our climate, he points out, has been solved as being a composite of three quantities—the amount of radiation received from the sun, the fraction of this radiation reflected back from the earth into space, and the absorption of infrared radiation in the atmosphere, modified by such factors as atmospheric and oceanic circulation and storage of heat in the great seas. Reflection, the second quantity, is chiefly from ice, snow and clouds.

As a weather- and climate-control measure, he explained, the average reflectivity of the ground surface over a large area might be reduced by rapid melting of the snow cover, thus increasing the percentage of sunlight absorbed. Or, for a different effect, it might be possible to shut off some of the sun's radiation before it reaches the earth's surface by injecting a small amount of absorbing or reflecting substances into the upper atmosphere.

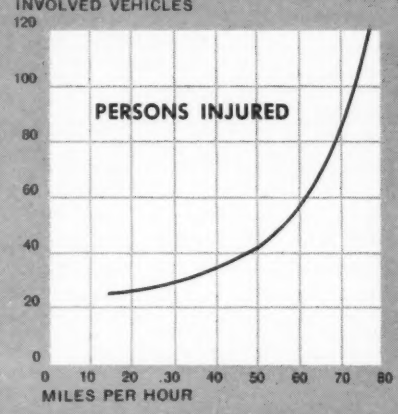
**Both Insurers and Insured Will Benefit**

When the day of controlled weather and climate arrives, the insurance industry's job of protecting the value of life and property will be simpler by many millions of dollars. In the one hardest-hit state, which is Texas, the average property damage over a 40-year period has been about $88½ million annually from tornadoes alone, according to Donald A. Tripp, manager of the Mutual Reinsurance Bureau, Belvidere, Illinois. Even as far down as 10th place, Iowa has an average of 14 tornadoes a year doing almost $33 million property damage. Until science comes up with the controls, the insurance industry must contend with the threat, among many others, that no place in the world is more favorable for formation of tornadoes than is central U. S.

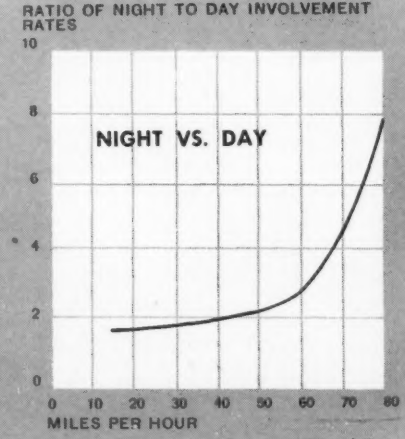
Meanwhile, weathermen are shooting for 100 per cent perfection of their forecasting and control in the spirit that "not failure but low aim is crime" when the stakes are as high as they are in terms of life and property. ⊙




A decline in the number of accidents is registered from 35 to 65 mph, but after 65 mph begins to rise sharply.




Proof that speed has a very definite bearing on number of persons injured shows here in the increase at 50 mph.




Accidents double during night driving compared with daytime driving, and soar to 8 to 1 at speeds of 80 mph.

# PROBING THE 'OUTER SPACE' OF AUTO ACCIDENTS

*Here are new research findings on what's wrecking more cars and killing more people.*

RECOVERING A CAPSULE and getting a man-in-space back alive is a feat awaited by the world, cost notwithstanding.

Considering the lives and property involved, something even more spectacular is being sought by the U. S. Bureau of Public Roads: a formula whereby passenger automobiles will reach their destinations sans crack-ups and with all passengers safe and alive. Some of the bureau's research to that end is summarized graphically here.

Improbable though such a formula may be, it is one to ponder. By the end of this month we will have killed about as many people on our highways this year as died in air accidents during the past 25 years of civil aviation. Motor vehicles remain five times as deadly as airplanes on a passenger-mile basis.

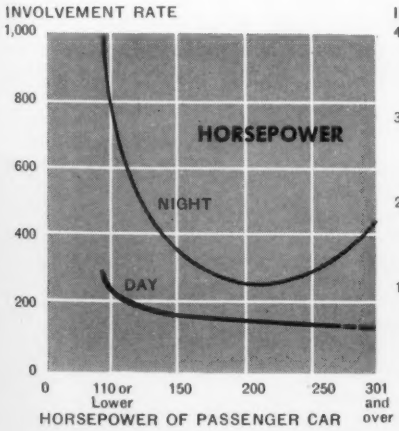
Officials of the Bureau of Public Roads are promising no one-shot triumph. Research aimed toward a single solution for traffic accidents is bound to be futile and is not their purpose. But they are getting proof of how and why the nation has an annual multibillion highway accident toll and what can be done about it.

Witness: Fifty-five per cent of our traffic deaths occur at night. Booze is involved in at least 30 per cent and probably many more of our traffic fatalities. Highways without access control and modern design have 2½ times more deaths per mile traveled than our best highways.

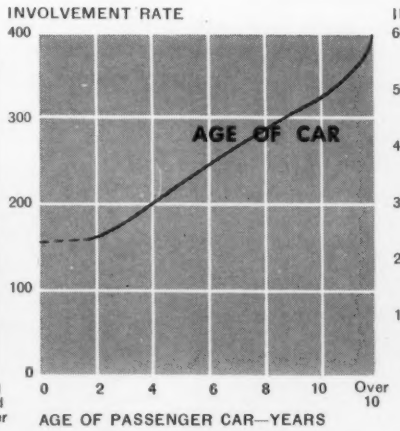
Antisocial behavior seems to be associated with traffic accident involvement. This was brought out in a study of two cities with considerably different traffic records. But the causative factors for the difference couldn't be pin-pointed. Researchers consider this further evidence that the traffic-accident history of any given area combines a multitude of influences and their interworkings.

Research problems also involve a myriad of variable and poorly understood factors, including the effects of weather, road surface, light condition, driver-knowledge and ability to function reliably, and the interaction of these many variables in an accident situation.

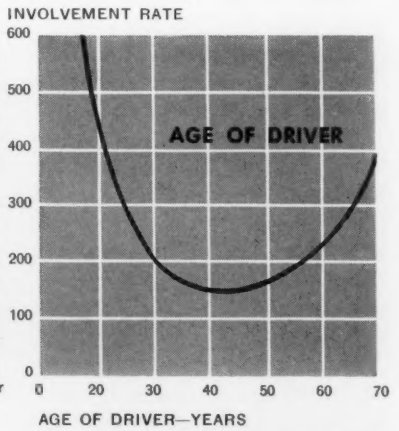
If we ever get the man-in-space back safely, we might also succeed in getting the autoist home safely with his car intact. ⊙




Statistics on horsepower of autos involved in accidents show that the least powerful are more hazardous at night.




As autos get older and develop mechanical faults, their rate of accident involvement shows a marked increase.




Teen-aged drivers and those more than 60 years old have the highest rate of involvement in daytime auto accidents.

Trans World Airlines

*Business firms warm up employee relations and incentives by fostering more travel.*

"COMPANY EMPLOYEES once considered the annual picnic their big social event of the year. Now they charter a plane and go to Europe."

This remark by an industrial recreation director sums up one of the newest trends in the great American travel boom: the growing involvement of business firms in helping plan employee junkets to faraway places.

For many employees, these group tours offer the finest chance they have ever had to travel with minimum expense and maximum personal security. Employers are finding travel an excellent way to build sales and good will. And for the American insurance industry, providing financial assurances for these travelers and their possessions is both good business and a good opportunity to demonstrate its world-wide protection.

Whatever the reasons, employee group travel is skyrocketing. By the end of 1960, more than a quarter-million salesmen, office clerks, factory workers, supervisors and executives will use this budget-saving way to see the world. Items:

¶Eastman Kodak Company, Rochester, New York, has scheduled four charter flights to Europe during the next three months, three for active employees and one for retired workers. They'll spend three weeks touring the Continent for about $800 per person—approximately the cost of first-class air fares alone at regular rates.

¶Union Bag-Camp, Savannah, Georgia, has arranged two cruises with rates starting at $115 to Nassau and $145 to Bermuda.

WANDERLUST

¶Sperry Gyroscope Company, Great Neck, New York, will offer five cut-rate flights to Mexico this year, plus a 12-day cruise aboard the Ocean Monarch, a 16-day bus trip to California, and several weekend jaunts to places closer by.

Economy is the fundamental attraction of group tours, coupled with the indication that many people apparently find it reassuring to

E. F. MacDonald Company

→ Winners in a Studebaker sales contest cavort on the beach in Jamaica following business sessions. These incentive trips have helped boost group travel.

←
Employee group travel came of age when 141 factory girls at G.E. plant in Fort Wayne chartered planes for European tour.

*E. F. MacDonald Company*

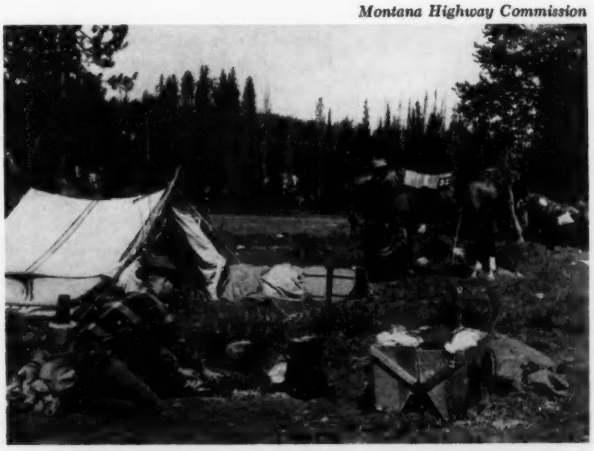
→
Buick dealers and their families went to Hawaii on a group tour, received hula lessons and group accident insurance coverages as part of the VIP travel package.

*Trans World Airlines*

Europe is first choice for charter flights by employee groups, followed by the Caribbean and Hawaii. Here a U.S. group joins a boat excursion on the Rhine.

→
For those who prefer solitude, some firms help make travel arrangements to such places as Montana's uncrowded mountains.

*Montana Highway Commission*



*Wanderlust Works Wonders*

*French Government Tourist Office*

*Fred Harvey*

← Pack mules are the sole means of transportation into Grand Canyon, have good safety record. Just in case, trip insurance is available.

Salmon fishing on the Columbia River attracts thousands of anglers each year. This beauty was caught near Astoria in Oregon.

*Oregon State Highway Commission*

have some friends along when they go on long trips. By chartering a plane or bus and arranging other accommodations on a group basis, they can often cut total expenses by one-third or even one-half. Most group tours are sponsored and organized by a travel club formed by the employees themselves.

In some instances, however, companies not only sponsor tours but pay all expenses. In such cases, travel is offered as an incentive prize to key production personnel, salesmen or distributors when the company wants to put on an extra burst of effort to increase sales or introduce a new product. The E. F. MacDonald Company, which specializes in incentive programs, estimates it arranged trips for 25,000 people from 350 companies last year—a 40 per cent increase over 1958. A. E. Ostholthoff, manager of the travel division, looks for another big jump this year.

No matter who picks up the check, insurance is an integral part of the planning that goes into a successful group tour. If the trip is company-sponsored, management may find it desirable to re-examine its liability coverages to make certain the firm has full coverage in the event of mishaps. In addition, the MacDonald company and others include a minimum of

←
Off the beaten path in Brittany, villagers bless boats and fishermen before sending them out to face the perils of the sea.

→
Canada's broad highways lead to spectacular scenery and colorful festivals, ranging from Scottish highland games to log rollings.

*Canadian Government Travel Bureau*

$5,000 worth of individual accident insurance as part of their incentive travel package.

At Sperry Gyroscope, the well-traveled Cosmopolitan Club handles finances, insurance coverages and other details by appointing a travel leader for each group planning a trip. Once the people are signed up, they gather for a conference with an insurance man, the travel agent, and a representative of the airline, railroad, bus company or steamship line. These experts answer questions and get all the necessary documents signed—including trip insurance policies on both the people and their baggage.

Many people also find vacation season a good time to check up on their other insurance coverages. Those who plan to close up their homes for an extended length of time, for example, may realize that they need more adequate protection against fire, burglary and other hazards covered under today's homeowners policies. If they plan to take along valuable cameras, jewelry, outboard motors, golfing or fishing equipment, they probably will want to purchase the low-cost, virtually all-risk policies for these items.

Even if they take along no more than a bathing suit and a few wash-and-wear suits, today's travelers are well advised to consider a personal liability policy. This protects them against all the mishaps that might result in property damage or injury to other people, including members of their own group.

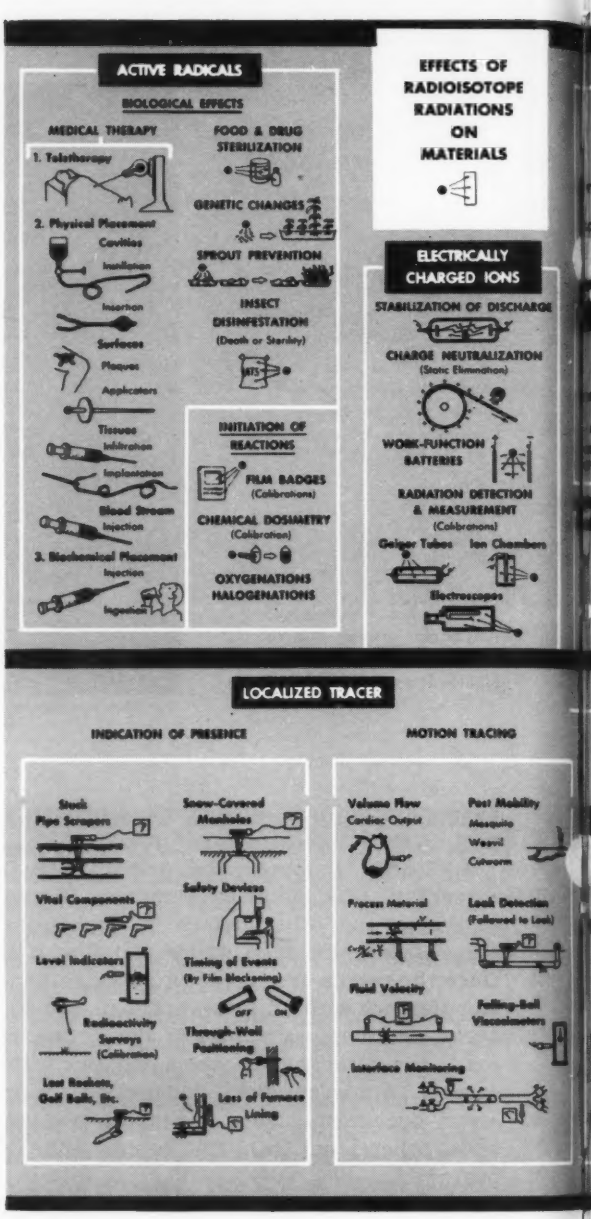
One of the cardinal rules for a successful group tour is to start planning it well in advance. Employees need time to save money for the trip and travel agencies need time to arrange for good accommodations. If the group plans to charter a plane, it must meet rigid CAB regulations—including a provision that only year-round organizations are eligible and that each person making the flight must have been a member for at least six months.

"I'd recommend that companies begin planning for their first trip at least a year and a half ahead," says Paul Neuman, recreation manager of Stromberg-Carlson. His group had trouble getting off the ground with its first trip to Europe last year, but the rewards were even greater than expected.

One employee, on a return visit to his old home town in Italy, met the daughter of friends he had known before he left 46 years previously. Two months later he made another trip to Italy to bring her back as his bride—proof enough that wanderlust indeed works wonders. ⊙

# OUR IRRADIATING INDUSTRIES

*Paper, petroleum and many other businesses now benefit from this new tool.*




RADIOISOTOPES AT WORK for American industry, as depicted here, have repaid the investment in them and in related equipment with ten-fold dollar benefits. Reaping the largest benefit, among the 20 major industrial groups utilizing radioisotopes, is petroleum refining, according to a census compiled by the National Industrial Conference Board under contract with the Atomic Energy Commission.

These man-made atoms that give off radiations akin to X rays are being used to measure and control manufacturing processes; to inspect materials, parts and finished products; to determine the cause of processing difficulties, and to facilitate research.

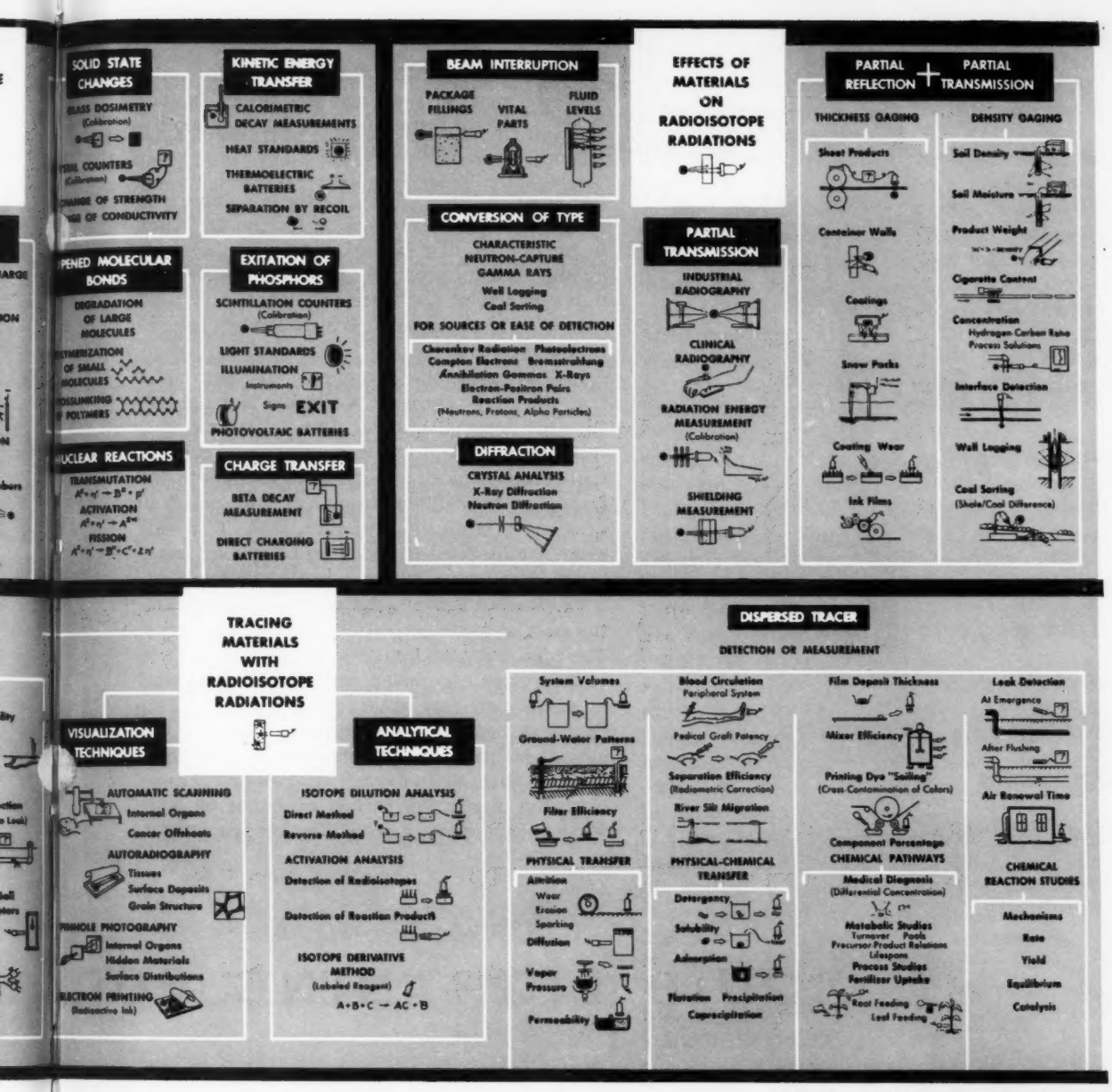
Where they are being used successfully, they are providing savings or increased profits by decreasing raw material consumption, reducing finished-product scrap, increasing productivity and lowering labor costs, the NICB found.

Radiation detectors are used to pinpoint a leak in a hot-water heating system under a concrete floor. Radioactive salt has been pumped into the pipes, causing a high amount of radioactivity to register at the exact point of leakage.

*Nuclear-Chicago Corporation*

The paper and allied products industry has the largest number of radioisotope users. Other industries, along with petroleum refining, which are making annual savings of millions of dollars credited to radioisotopes include tobacco, rubber, and engineering and architectural services.

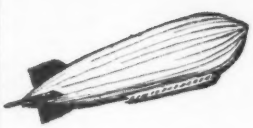
Arrival of the radioisotopes on the industrial scene created a radioactive-contamination haz-




*Howard F. Gunlock, Nuclear-Chicago Corporation*

ard requiring financial safeguards. Special steps taken by the insurance industry have provided such protection. Standard property and liability insurance policies have been extended where necessary to guard against the danger of losses caused by radioisotopes in industrial use. Thus, while broad atomic pool coverages (April 1960 JOURNAL: "Atomic Energy's Super Insurance") protect the reactor end of the nuclear industry, regular insurance forms with special endorsements guard the atoms-for-peace jobs being performed by radioisotopes.

Mighty as radioisotopes have proved to be in American industry, only a very small percentage of American industrial companies have as yet cashed in on their possibilities for cost-saving and profit-making. Some, such as the tire and paper industries, have used radioisotopes extensively. Others have yet to try them, even as research tools for which they excel. ⊙



HYDROGEN, the big item in aerial news 41 years ago this month, is once again being prepared for duty aloft—this time in space.

Today, it's liquid hydrogen, identified as an "ultimate" fuel by the Air Force and now in large-scale production for the first time in history. It figures importantly in the U. S. missile-security program. It will also power the upper stages of the National Aeronautics and Space Administration's Saturn space exploration vehicle.

In July, 1919, the hydrogen news was not a fuel story, but rather a world-beating lighter-than-air accomplishment. The British dirigible R34 made the first two-way crossing of the Atlantic and heralded a heightened interest in the giant, hydrogen-filled "sausages" that lasted up to another fateful day in May, 1936. That was when the ill-fated Hindenburg burned at Lakehurst, New Jersey, with the loss of 35 lives.

The Hindenburg disaster marked the peak and the end of hydrogen-lifted airship popularity. The high point in fame for today's liquid form of the element, however, may well be far ahead in a Mars shot or other space triumph. This chemical fuel possesses an energy content almost three times that of present fuels. In combination with liquid oxygen, it gives an increase in thrust in relation to fuel expended of some 40 per cent more than present rocket propellants.

*After its famous failure as a dirigible gas, hydrogen in a new form comes into its aerial own*

# LIQUID LIGHTNING FOR S

*Official U. S. Navy Photo*

*Air Products, Incorporated*

During initial testing and development stages, liquid hydrogen production facilities were provided by plants in Painesville, Ohio, and Bakersfield, California. Today the world's first unit to produce the fuel on a tonnage basis, estimated at some 10 million pounds a year, is operating in Palm Beach County, in the Florida Everglades. It is known as Air Force Plant No. 74, though during the construction and trial phases it was casually referred to as "Papa Bear."

Today's liquid hydrogen is called "undoubtedly the purest hydrogen ever made." Among problems successfully overcome in its development was the design of a conversion process to change it from an unstable to a stable form for storage and transportation purposes. Another hurdle was devising economical manufacturing of refrigeration at only a few degrees above absolute zero temperature (minus 460 degrees Fahrenheit) in order to liquefy the gaseous hydrogen.

A key requirement of the liquid hydrogen development program was safety of operations in production plants and in storage and transportation activities. Chief potential hazards of the fuel are: It is cold enough to freeze human tissues; its expansion upon vaporization can create high pressures capable of breaking containers; as a fuel, it can burn or explode. Coupled with these hazards are three major circumstances closely guarded against in liquid hydrogen systems: the presence of oxidants in the fuel; spillage, perhaps the most serious possibility; and vented gas, the most frequently encountered problem.

None of these hazards is unique to liquid hydrogen, but each exists to some degree just as in the case of other fuels. Elaborate safety precautions have been developed to guard against the relative dangers of the liquid hydrogen system. One example of safety engineering is indicative of the care taken with the new super-fuel. That example is the successful development of specially designed tank trailers for safe large-scale, long-distance liquid hydrogen transportation.

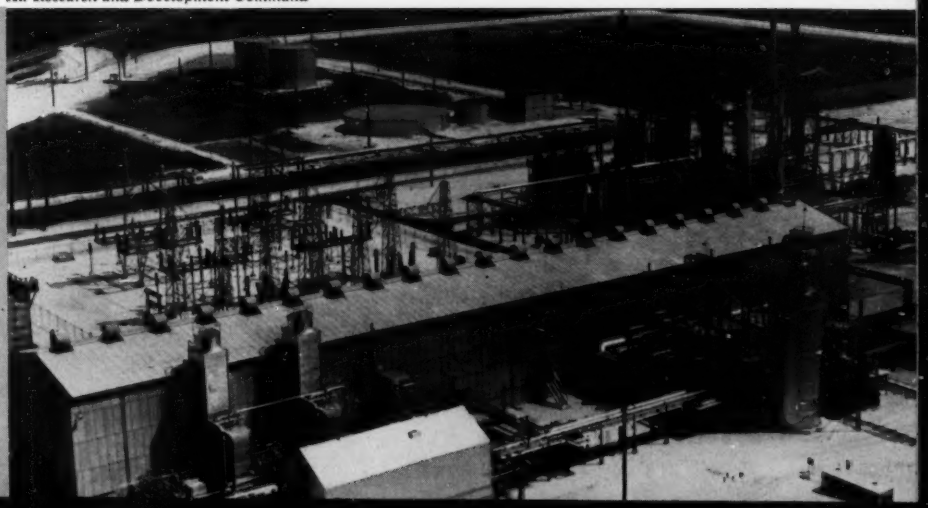
The tank trailers feature uniquely insulated containers which are actually an adaptation of the principle of the familiar Thermos bottle. The special containers are required to prevent evaporation, because liquid hydrogen exists at the very low temperature of minus 423 degrees Fahrenheit. Each 7,000-gallon tank trailer holds more than two tons of liquid in its inner chamber, suspended inside an outer shell.

Built to military specifications, the trailers were planned for safe duty under battle conditions if need be. They can operate on boulder-strewn fields, desert sands and in subtropical and salt-sea climates without losing operating efficiency. The transports can also be shipped by plane when more expedient.

A credit to American loss-prevention engineering, a field long pioneered and strengthened by mutual insurance, the skillfully designed trailers also have one natural fact in their favor. The new rocket fuel is not only one of the coldest liquids, it is also the lightest element on earth. If the transports were to carry water instead of hydrogen, the weight of each load would be 30 tons instead of two. ⊙

## R SPACE LEAPS

*Air Research and Development Command*



Supercooled liquid hydrogen must be hauled in these specially equipped tank trucks capable of keeping the fuel at 423° below Fahrenheit zero to prevent evaporation in transit.

One of three U. S. liquid hydrogen plants, this facility in Florida's Palm Beach County makes chemical fuel for Air Force ventures into space and for military missiles.

Design of the 50-star flag stamp was done by artist Stevan Dohanos.

FROM OUR ANNALS

# INDEPENDENCE DAY

*1776-1960*

INDEPENDENCE DAY in this 184th anniversary year will be marked by the official unfurling of the new U. S. flag over the Union's 50th member-state, which was still undiscovered out there in oceanic space when the Declaration of Independence was adopted on July 4, 1776.

Hawaii and the surrounding islands were, in fact, not discovered until two years after that first Independence Day. And at the time they were found in 1778 by Captain James Cook, they were under the rule of four warring native kings.

Mutual insurance had already completed its first quarter century of service in America when the land of the new 50th state was discovered.

Commemorating the official date of the new flag bearing Hawaii's star, the 50-star flag stamp is to be placed on sale for the first time this Independence Day at the capital, Honolulu.

Independence Day thus becomes a doubly eventful date in Hawaii history, for on July 4, 1894, the Republic of Hawaii had been proclaimed and an extremely progressive constitution adopted. On May 31 of that year, the U. S. had recognized that Hawaii should enjoy its own government and that interference from any foreign power would be considered unfriendly. The recognition was made official on August 8, 1894. Statehood came to Hawaii on March 18, 1959.

With all homage to the Betsy Ross story, it is now recognized that the first U. S. flag following the Declaration of Independence and all those up to and inclusive of the 50-star banner were evolvements rather than the creations of individuals. History of the official flag dates from June 14, 1777, when Congress passed a resolution "that the flag of the United States be 13 stripes alternate red and white, that the Union be 13 stars white in a blue field representing a new constellation."

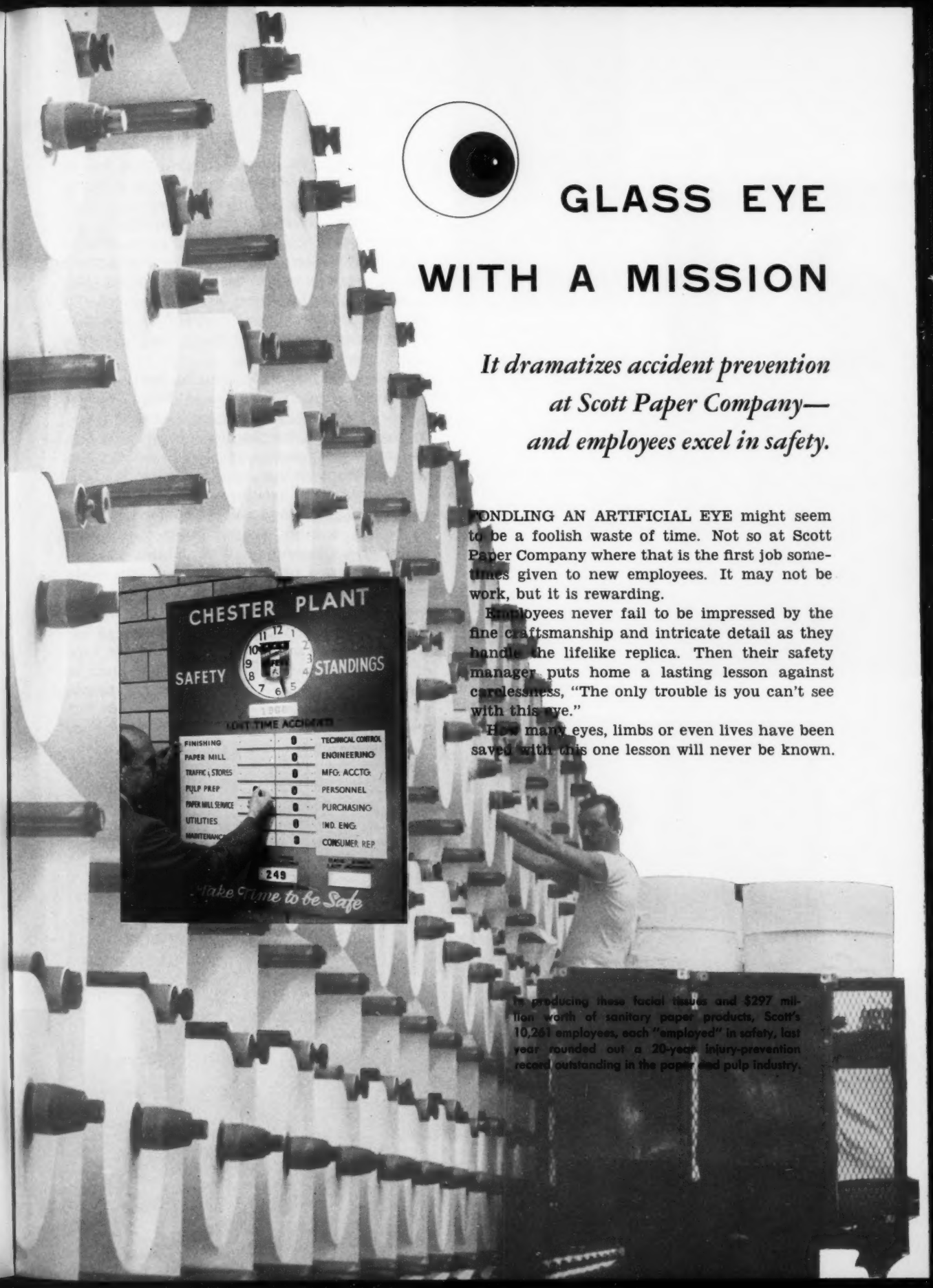
After Vermont and Kentucky had been added to the Union, Congress added two each of stripes and stars. But in 1818 Congress again changed the design, restoring the 13 stripes denoting the 13 original colonies and specifying that a star be added to the blue canton for each state after its admission to the Union.

Design of the first flag to these specifications is credited to Captain Samuel Chester Reid whose grave is in the Green-Wood Cemetery in Brooklyn, New York. The first flag of the kind, made by Mrs. Reid, was flown over the Capitol at Washington, April 12, 1818.

But Betsy Ross and her home city of Philadelphia will be forever linked with the history of the flag and of the Declaration of Independence which created the Union. What is recorded as the first official observance of Flag Day outside of school ceremonies occurred at Philadelphia on June 14, 1893. By the mayor's orders, the flag was displayed over every public building pursuant to a resolution of the Colonial Dames of the city, whose president, Mrs. Elizabeth Duane Gillespie, was directly descended from Benjamin Franklin.

The first public reading of the Declaration of Independence, by Colonel John Nixon, likewise took place in Philadelphia on July 8, 1776, following the tolling of the Liberty Bell.

Those first words, "When in the course of human events . . ." today bespeak the urgency of wise decisions and farsighted action in behalf of political freedom for mankind, just as they did 184 years ago. ⊙




# GLASS EYE WITH A MISSION

*It dramatizes accident prevention at Scott Paper Company— and employees excel in safety.*

FONDLING AN ARTIFICIAL EYE might seem to be a foolish waste of time. Not so at Scott Paper Company where that is the first job sometimes given to new employees. It may not be work, but it is rewarding.

Employees never fail to be impressed by the fine craftsmanship and intricate detail as they handle the lifelike replica. Then their safety manager puts home a lasting lesson against carelessness, "The only trouble is you can't see with this eye."

How many eyes, limbs or even lives have been saved with this one lesson will never be known.

In producing these facial tissues and $297 million worth of sanitary paper products, Scott's 10,261 employees, each "employed" in safety, last year rounded out a 20-year injury-prevention record outstanding in the paper and pulp industry.

Time-tested protective measures are impressed upon all employees in many ways, as by proving safety glasses will withstand nail-driving.

When machine adjustments must be made where solvent flashes might occur, Scott employees are protected with aluminized asbestos suits.

Members of the plant's protection group don their all-purpose oxygen breathing units in case of fire and other emergency situations requiring unfailing action.

## *Glass Eye With a Mission*

It is a matter of record, though, that for 10 years Scott Paper Company's lost-time injury score has been substantially better than that of the pulp and paper industry in general.

For 20 years the record is even more remarkable. In 1939, Scott was only a one-plant organization operated by less than 1,000 persons. But more than 140 lost-time injuries occurred. In 1959, with 14 Scott plants in operation throughout the country and 10,261 employees, there were only 68 lost-timers.

Whatever else his job may be, every one of the 10,261 men and women is "employed" in safety at Scott Paper Company, whether he is in Anacortes, Washington, in Hoboken, New Jersey, or at the company plant headquarters in Chester, Pennsylvania.

One of the first meetings which the new employee is required to attend is a conference especially set up to protect him with good safety practices and techniques. The artificial-eye lesson is only one of the clinchers which safety managers use in these sessions. If there is any secret to the success of the Scott program, it is the chin-to-chin, personal approach.

Scott has, of course, every appropriate type of mechanical safety device. In fact, prior to the early 1940's, safety at the Chester, Pennsylvania, plant was, by and large, engineered. But the number of accidents was disturbingly high year after year. Seeking a remedy, the company turned to the personal approach under the direction of its first plant safety manager. Thenceforth, safety was promulgated on an individual basis. In the first full year thereafter—1943—the number of lost-time injuries was reduced to

Ear protection gets high-priority attention in the company's over-all safety program. Here silencer lips, which are installed inside vacuum press rolls on the paper machines, help to keep down noise in the mill.

21 whereas it had been well in excess of 100 annually before at Chester.

For years now, a responsibility impressed upon executives, managers, supervisors and safety officers at Scott is to send back to their families—safe, sound and whole when the day's work is done—the husbands, wives, fathers and mothers, sisters and brothers, who are entrusted to their care.

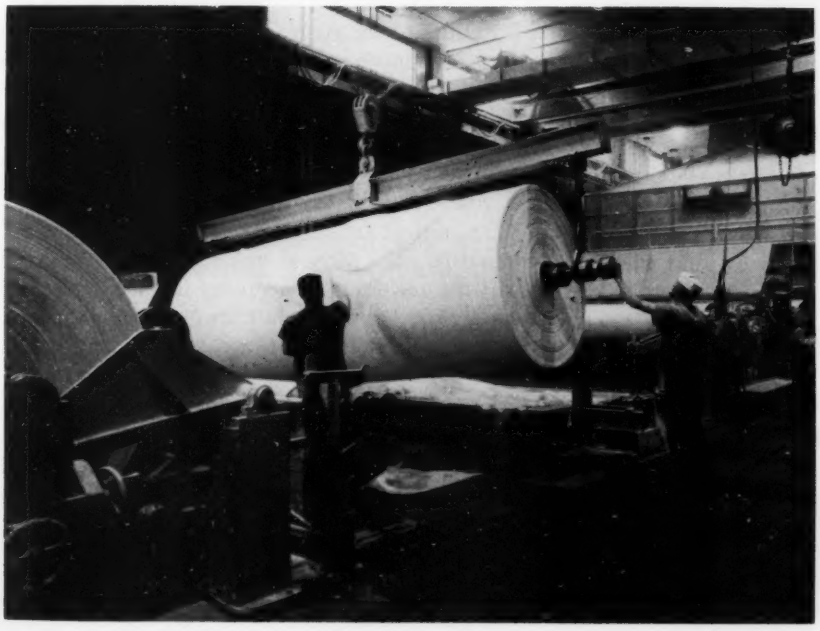
This charge was first propounded by A. J. Schroder II, the company's administrative vice president, when he was director of industrial relations. He is now a member of Scott's executive safety committee which includes six other men from top management. These men, meeting once a month, originate policy concerning Scott safety programs. They also thoroughly review all lost-time injuries in each plant.

When a lost-time accident occurs, a report on it must be filed promptly at headquarters in Chester, with full details covering all circumstances leading to the accident and with photographs of the area where the accident occurred.

For the personal, chin-to-chin approach in the firm's safety programming, safety commit-

In woodlands operations the Northeast and West Coast divisions ended 1959 with the best injury-prevention rating since the safety program started there. This West Coast high-rigger will remove large knots and limbs, then top this 200-foot silver fir.

Even rugged loggers practice their Scott safety creed. Prior to being swung onto the truck, a log is heeled firmly against the boom of the loading crane so that a sure control can be established and maintained until the log is safely on board.



High-speed machines, continuous processes and big, heavy products, such as in the main plant, Chester, Pennsylvania, are factors making the Scott safety record notably worthy of citations it has earned. In all, the company now has 14 plants throughout the U. S.

tees function at all levels within the organization. Whether the group be comprised of those in supervisory capacities or of hourly employees, all are dedicated to selling safety on a man-to-man basis. One of the best examples of this is the wholehearted cooperation of the labor unions active in the company.

Backing up the committees and the individual efforts, a number of educational tools such as films and slides are used to strong advantage. Bulletins and posters are prominent throughout each plant. The company publication, *The Scott Broadcast,* covers safety news. It is a rare edition which doesn't have a safety story, usually on page 1. Every plant, too, has a safety scoreboard.

But none of these devices is considered to be the sole means to an end. Instead, they supplement the over-all program.

A definite factor in the reduction of injuries has been such protective items as safety shoes, hard hats, safety glasses and goggles, gas masks, welding shields and ear protectors. But it is still the individual's responsibility to regard safety as a "do it yourself" project. Safety shoes, for example, are useless to the person who keeps them in his locker during working hours.

There is just as much of a premium on safety suggestions at Scott's as there is on ideas for more efficient production or for quality control. Ideas for improving safety conditions earn a financial reward for the employees submitting them.

One of the highlights of the Scott safety program is the annual safety banquet normally held in Chester and for which the corporate staff group picks up the check. Attendance from each plant is determined by that plant's safety results.

**Oregon Mill Tops Company's Safest Year**

This past year the Empire, Oregon, mill was the pride of Scott's. For the second time in the past three years, plant personnel at Empire had a year unblemished by a single lost-time injury. The company's over-all safety record for the year was the brightest it has ever been, and Empire helped mightily to make it so by being the one plant in the circuit with a spotless score.

An all-time company high was established at the Marinette, Wisconsin, plant. The men and women at this paper mill and finishing operation accumulated 3,484,427 man-hours without a lost-time injury and in so doing worked safely for 1,034 successive days. Achievements in 1959 also brought a safety award to the Mobile, Alabama, plant by the American Paper & Pulp Association. Personnel at the Winslow, Maine, mill surpassed the 1 million safe man-hour limit to establish an all-time plant record there. And on the second day of 1960, employees at the Detroit installation exceeded the 1 million man-hour mark—also a plant record—as their safety program began to produce new results.

In woodlands operations, the Northeast and West Coast divisions finished 1959 with the best combined frequency rating since the safety program for this area of the business was initiated.

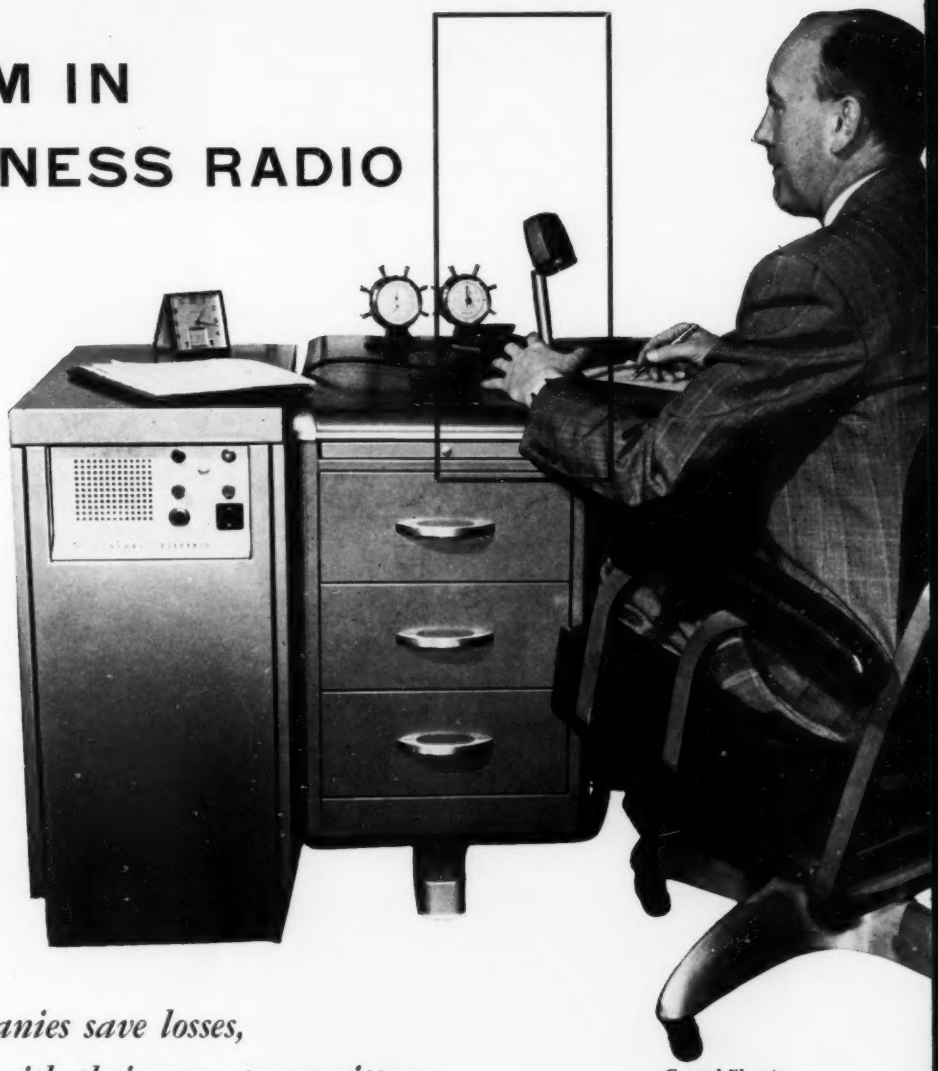
**Past Records No Guarantee Against Mishaps**

If Scott employees have learned anything about safety, it is that records themselves are never safe and inviolable. Such was the case at Oconto Falls, Wisconsin, in 1959 when a truly outstanding record fell after employees there had operated for three consecutive years (1956-57-58) without a lost-timer. For this the Oconto Falls plant had received the Edward Benton Fritz Memorial Trophy for two years in succession. This award is presented annually by Fritz Publications of Chicago to that U. S. paper mill which in the opinion of the judges has the most outstanding safety record during the preceding year. In addition, Oconto Falls personnel had received a number of other awards including one from the National Safety Council and another from the American Paper & Pulp Association. Now they are out to establish some new records.

In a new phase of the Scott safety program, the entire sales force is being mobilized against lost-time accidents. Beginning in 1960, monthly reports are issued on all traffic accidents involving Scott salesmen. In each case the cause and circumstances of each mishap are summarized and distributed to each Scott salesman. With the addition of this report, three monthly bulletins now provide details and follow-up action on all lost-time injuries or auto accidents.

In that way and others, Scott is never going to be satisfied until every man or woman in the organization goes home safely every day, year in and year out. ⊙

# BIG BOOM IN BUSINESS RADIO



*Thousands of companies save losses, gain other benefits with their own transmitters.*

General Electric

IT ISN'T LISTED in any program guide, but the hottest thing in radio these days is a businessman's variety show, live and unrehearsed. Sample episode:

"Pioneer calling 313."

"313, over."

"Freezer off at Franklin Luncheonette, 763 Main Street, ice cream turning soft."

Seven minutes after receiving this message via two-way radio, mobile serviceman number 313—John Newton of the Borden Company's Pioneer Ice Cream Division—was working on a clogged condenser at 763 Main Street.

Borden is one of more than 136,000 companies that has turned to radio communications to help save time, lives, money, customers and property. Radio equipment, long in use by cabs, law enforcement officers, fire trucks and ambulances, is now coming into wide use by industrial safety patrols, insurance adjusters, repairmen, emergency auto service companies, mobile guards and other agencies that help reduce losses to businessmen and insurers.

Although business use of radio is not new, the boom really started about three years ago, when the Federal Communications Commission began opening up a number of new frequencies for business, industrial and personal uses. Now any

bona fide businessman can get an FCC license to operate his own radio transmitter, and can buy or lease the equipment he needs from Motorola, General Electric, RCA and several smaller manufacturers. The cost varies from about $140 to $1,000 for two-way outfits used in automobiles, to $1 million or more for some of the elaborate microwave networks that span half a continent.

The big difference between these business radio systems and commercial broadcast stations is in their power and range. Broadcast stations generate up to 50,000 watts, and some of them can be heard for hundreds of miles. Most business transmitters are limited to 100 watts or less, covering areas ranging from a few hundred feet to 50 miles. Pipelines and power companies often extend this range by setting up microwave stations about 25 miles apart to relay Teletype, telemetering and voice communications along their right of way.

Both two-way and microwave equipment—including the transmitters, towers, power units and other attachments—can be insured under special inland marine insurance policies that

*Radio Corporation of America*

**SAFETY PATROL**
Nation's third largest trucking firm uses two-way radio to keep tabs on its fleet of 1,500 trucks. Disabled vehicles can get quick help to make repairs, save perishable cargo.

*Motorola Incorporated*

**DOCTORING LIVESTOCK**
Veterinarian's wife, Mrs. John Holmes, relays calls to her husband with this 60-watt transmitter. Use of radio cuts his travel time 50 per cent and helps save a lot of livestock.

**POWER LINES**
Dish-like antennas of Arizona Power Company's microwave network provide "party line" for maintenance men, supervisors. Microwave also makes possible remote control of substations.

*Radio Corporation of America*

*Radio Corporation of America*

**CONCRETE MIXING**
Ready-mix concrete firm now is able to time its deliveries with the customer's work pace. This insures a steady supply and helps prevent leftover loads that have to be dumped.

*Allis-Chalmers*

**CUSTOM COMBINING**
Earl Estill harvests wheat to order for Midwestern farmers, dispatching trucks as needed to pick up the grain from the combines and take it to elevators for drying and storage.

**TELEVISION REPAIRS**
Tucson appliance firm cut its work week from 48 to 44 hours after installing radios in its service trucks. Two-way sets cost $140 to $1,000, can be insured as part of the vehicle.

*Motorola Incorporated*

cover virtually all physical hazards, from fire to falling aircraft. Mobile radios installed in vehicles are usually insured by simply endorsing the regular auto policy, often at no extra premium. In addition, the antenna towers are covered by liability insurance to protect the manufacturer, the erecting company, and the buyer from damage suits if the tower chanced to topple onto someone's property.

One Middle West tower manufacturer, for example, has $300,000 in products-liability insurance to cover damage resulting from any structural defects. A retailer who sells and installs his towers has another $200,000 policy covering mishaps resulting from his workmanship, both during and after installation. The buyer most likely will cover his liability hazard under the same comprehensive policy that he carries on the rest of his business operations.

Fastest growing use of business radio is in cars, trucks, warehouses and other places where the movement of people and vehicles needs to be co-ordinated and controlled.

Trucking companies and other fleet operators report the use of two-way radio enables them to get as much work done with four vehicles as they formerly could do with five, largely by eliminating wasted mileage and excessive waiting time at loading docks and telephone booths.

A radiator shop in Kansas City, for example, installed a 100-watt transmitter in 1958 to dispatch its service trucks and has managed to save 35,000 miles a year per truck in its delivery service. Dr. John Holmes, a veterinarian from Lawyersville, New York, estimates his wife has cut 10,000 miles from his yearly travel and added an extra $2,000 to his income by keeping him posted via his two-way car radio.

Equally important, many companies say the use of radio has improved the quality of their services. In Detroit, the American District Telegraph Company reports two-way radio has cut in half the time it used to take ADT guards to respond to a burglar alarm. The Dime Savings Bank of Brooklyn uses two-way radio to provide one-day mortgage appraisals on homes and business property throughout Long Island. Two transmitters link 29 radio-equipped cars with radio-telephones on the desks of bank officers.

Other relatively new users of radio include laundries, photographers, plumbers, LP-Gas companies and ready-mix concrete firms.

From all indications, the boom in business radio is just beginning. ⊙

# READY AND A

*These University of Wyoming students, highly trained, are a famed Rocky Mountain mercy squad.*

DEATH-DEFYING RESCUE WORK to save the five mountain climbers on Mount McKinley this past spring may never be matched this year—if ever. But there will always be a seasonal succession of such tragedies as long as there are heights to challenge humans.

Always standing by in readiness are such Saint Georges as the members of the University of Wyoming's famed mountain rescue team. This is a 10-man squad of highly trained climbers known throughout the Rocky Mountain region for their readiness to go after persons trapped in inaccessible places.

Such feats as lowering a coed in a basket from atop the engineering building are routine practice for these mountain minutemen.

When disasters requiring their special skills occur, this remarkable team—like insurance—is prepared to move in swiftly to mitigate suffering. Another similarity is that much of its work is preventive: By training its own members and other interested groups in mountain safety, the team helps head off trouble.

The team was organized in 1955 when an airliner crashed into nearby Medicine Bow Park. Several students aided in the search and rescue efforts on the 12,000-foot slopes and later decided to form a permanent team for emergency service with state and local police, the Forest Service and the Air Defense Command. One recent call for help involved rescuing an elderly woman snowbound in a mountain cabin near Centennial, Wyoming.

If called upon for such an emergency, members of the university's rescue team are fully practiced in lowering a person in the Stokes litter basket from perilous mountain heights.

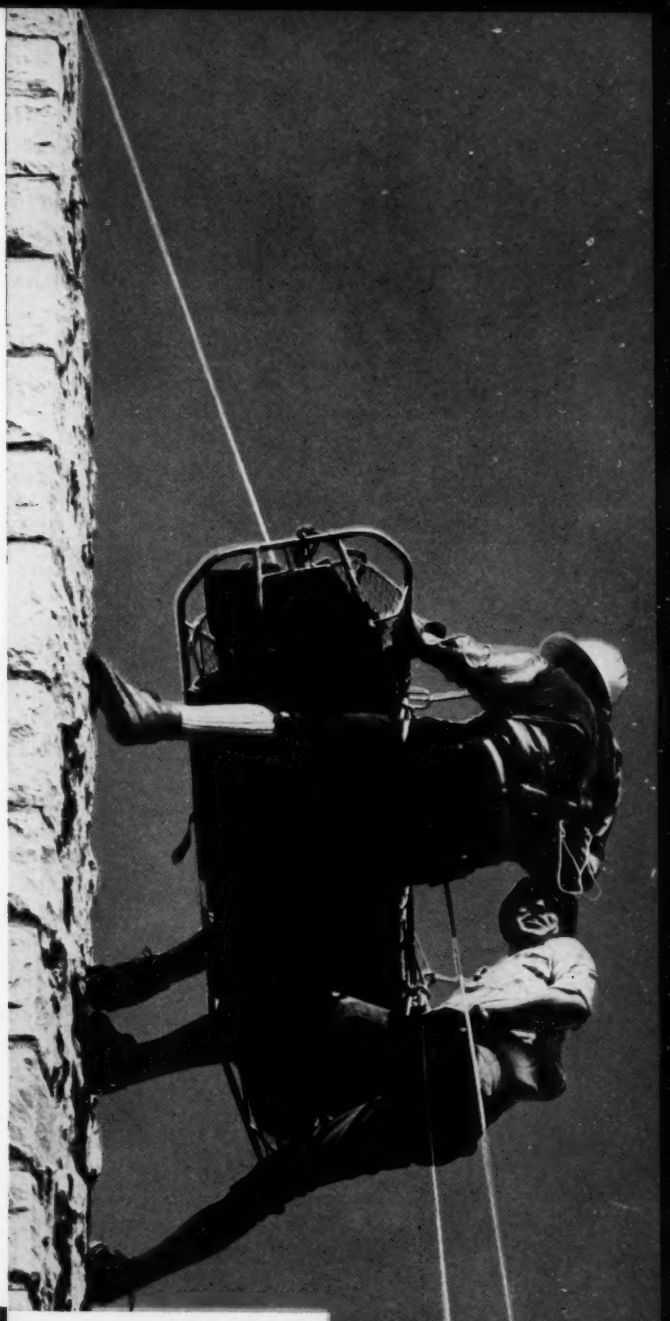
# D ABLE TO RESCUE

To train themselves for such tasks, the team spends its spare time in winter clambering up and down the sandstone walls of campus buildings. Members perfect their rescue techniques by strapping volunteer "victims" — sometimes their long-suffering girl friends—in a Stokes litter basket and lowering them gently to the ground by means of ropes.

When Laramie's gusty winters give way to a slightly less gusty spring, these intrepid climbers head for the mountains for some real workouts on the crags and precipices. They go fully equipped for action, taking along pack frames, hard hats, headlamps, an Army snowboat, outdoor sleeping equipment, Handie-Talkie radios and emergency rations.

Team members are constantly on the lookout for new recruits, but the standards are high. Prospective members must be reliable climbers, good team workers and must have had first aid training. They must also agree to practice regularly with the team and to be ready to move out at once to render aid in the event of emergency.

Fortunately, calls for help are infrequent in an area where most residents are wise in the ways of the mountains. But when misfortune does strike on the high slopes, the University of Wyoming's sure-footed mountain team is "ready and able to rescue." ⊙



Not a campus stunt, but tough practice by team members to perfect climbing and rescue techniques, improve communications and train recruits.

← Mt. McKinley, highest point in North America, had a new high in rescue heroics this year during the May crisis. Hudson Stuck, in 1913, first ascended the peak's 20,300-foot height and descended without rescue assistance.

*Air cars represent*
*a revolution in transportation—*
*and mutual insurance is in on the start.*

FLYING CARPETS are far from the fairy-tale fantasy modern folks might suppose.

Ask Hal Trimble. He rode one.

Chief underwriter for Country Mutual Insurance Company, Trimble is the first insurance man known to have tried out and then written liability coverage for an air car, the flying carpet of the very near future.

Officially, it's an air-cushion vehicle, and though you may not have seen one yet, tooling by at 40 mph a few inches above the ground—you will! Such phenomena may be as common as motorcars before long.

Air cars are in production and are in use by the armed forces, businesses, individuals. Such firms as Ford and Curtiss-Wright are turning them out; others are experimenting. Some intrepid individuals have built their own at home. One of these is Dr. William Bertelsen of Neponset, Illinois, who wearied once too often of getting stuck in snowdrifts and having to walk the last mile to a house call. Now he cuts cross-country in his homemade wood and aluminum Aeromobile, the one Trimble tried and Country Mutual made history by insuring.

That one was just the beginning. True, the principle of using a downward-directed peripheral air-jet to develop a supporting air cushion for a vehicle is not new. American patents on air-propelled cars date back to 1915. What is new is that air cars have recently begun popping up all over. They may never replace the automobile—but then again, they may.

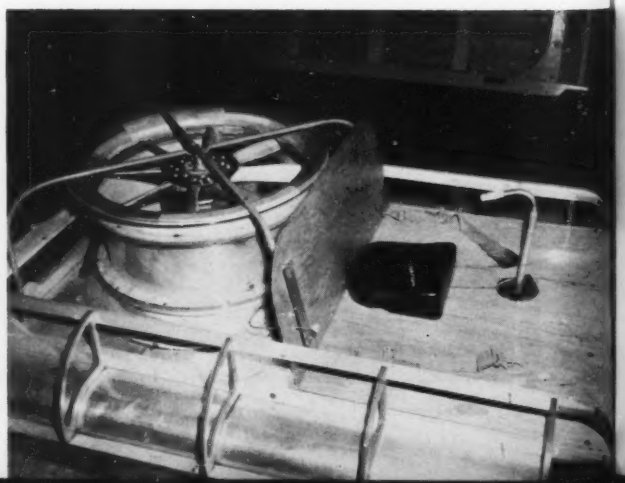
Simple models with one engine and one fan can be built for as little as $600. Unlike airplanes, they're cheap to operate and unlike automobiles, they have no tires, axles, drive shafts, gears, or even conventional brakes to need repairs. They can be driven by anyone who can drive a car.

Best of all, air cars are not restricted to road-

FREE AS A

Inventor Bertelsen shows Country Mutual Insurance underwriter Hal Trimble how to drive the Aeromobile. Trimble has a pilot's license but says air car is definitely car, not plane. Illinois authorities agreed after inspecting it; standard automobile license is required.

Dr. Bertelsen's Aeromobile — lifted and propelled by a controlled stream of high-velocity air deflected downward against the ground. Steering stick controls aluminum flaps around sides, changing air flow alters direction, speed. A 72-horsepower motor drives the fan.

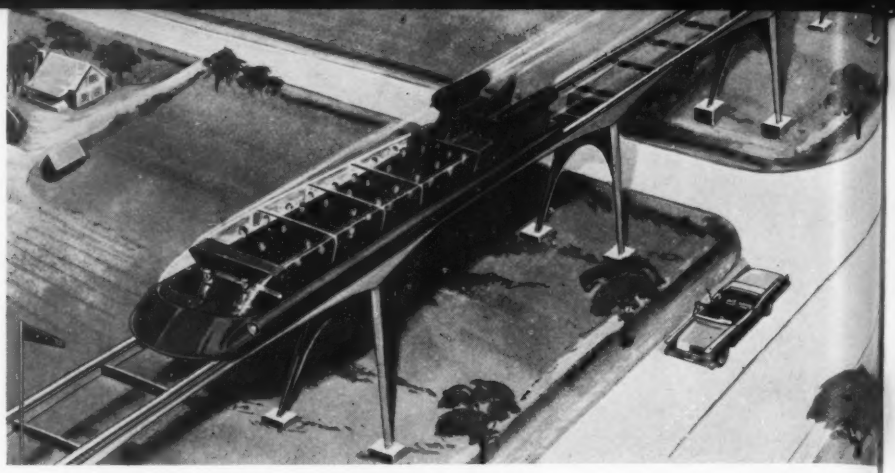


# S A FEATHER

*U. S. Army Ordnance*

Curtiss-Wright air car drew crowds when demonstrated in Rockefeller Plaza, New York. Four-passenger model costs $12,000 to $15,000, two-man car $6,000. They travel at height of 10 inches, up to 60 mph. Fans produce air for suspension, propulsion.

Pegasus I, ground proximity vehicle developed by National Research Associates for U.S. Army Ordnance. Marine Corps is testing a similar model. These air cars have four low-pressure fans, two engines, go 25 to 30 mph up to 15 inches above ground. Speeds of 50 or 60 mph are anticipated in near future.



An artist's conception of the Ford Levacar of the future. At 200 to 500 mile-an-hour speeds, it would be fast yet safe transportation between cities 100 to 1,000 miles apart, Ford believes. Company already has demonstrated a one-man Leva model.

## *Free As a Feather*

ways. They can skim across snow, ice, water, muddy fields and marshes, rutted roads or no roads at all. That is their No. 1 selling point with the military, farmers, ranchers, oilmen, sportsmen, rural mailmen and others cramped by crowded, inconvenient, impassable or nonexistent highways. Their potential for freight-hauling is almost unbelievable, says Hal Trimble. Because they are friction-free, they're so light "you could hitch a little dog to a whole string of loaded air cars and have him pull them to market."

It didn't take much stretching of the imagination for Trimble and his company to see the air car's possibilities—or the impact it could have on transportation, traffic laws, safety and insurance. Leaving traffic control experts to wrestle with the prospect of a countryful of air cars, each floating free as a feather without lanes, signs or signals, an insurer's first interest is in the safety and controllability of the vehicle. Here, based on his trial of Bertelsen's Aeromobile, Trimble is convinced an air car is a good risk.

### Mastery of Controls Keeps Machine Stable

"You wobble like a drunken man at first," he said, but once the driver learns the controls, the 400-pound machine is stable. It is operated by regulation of the air flow. For an emergency stop the driver simply cuts the throttle and the car sinks to the ground.

The only loss-prevention refinement Trimble could add was placing a safety guard over the big fan that scoops in the air. With the Aeromobile still such a crowd-puller, he feared injury to a too-curious child or adult.

The Aeromobile's top speed is 40 mph. It lacks the braking and steering control necessary for higher-speed operation, but Bertelsen is working on a more powerful and "sophisticated" model now. The more luxurious air cars of manufacturing firms will be easily as controllable as an auto, the makers say.

Curtiss-Wright's air cars, being sold strictly for off-highway use so far, will not tip or turn over, will accelerate and decelerate like an auto and maneuver even better, the company says. An air car can spin on its own axis, move sideways as well as make turns, and never causes worry about soft shoulders because it rides along 6 to 12 inches above them.

### One Type Suited to Mass Transportation

Ford sees its wheelless Levacar primarily as an intercity mass transportation vehicle, speeding along a fraction of an inch above guide rails and operated by electronic controls. Even at an anticipated speed of 200 to 500 mph, it should be as safe or safer than railroads or airlines, Ford says.

Despite the claims of safety and stability, experience still remains to be collected on the performance of air cars. Nevertheless, knowing what is known now, Hal Trimble has no hesitancy in hazarding his guess about them. To the peace of mind of prospective carpet-flyers, he says there should be no reason why insurance would not be available to them just as to auto drivers, and at no more than automobile rates. Rates could be considerably lower, for with the drivers who want literally to fly and their insurers both working on the safety aspect, air cars could turn out to be the safest things on no wheels. ⊙

Commissioner Francis R. Smith has held office since 1955, is an executive committeeman in the national association.

# SMITH OF PENNSYLVANIA

PENNSYLVANIA has long been high on America's honor list in history, scenic splendor and economic development. Now the state is attracting new national attention for its leadership in another field — community promotion and financing of new and expanded industry in depressed areas.

During the past 3½ years, 54 communities, together with their banks, insurance companies and the Pennsylvania Industrial Development Authority (PIDA), have financed 117 new industrial projects. When full work schedules are in swing, these operations will create more than 23,000 new factory jobs, all in areas of chronic and substantial unemployment.

Land and buildings alone for this plant expansion are costing nearly $50 million, with some $15 million supplied by PIDA and the balance provided by joint community-private institution support. Besides relieving unemployment, the new industry will soon be contributing importantly to the state's economic strength, traditionally renowned for coal, railroading and steel, as well as a $1¼ billion annual vacation business.

Pennsylvania's insurance industry, along with assisting in the development of the new plants, is being called upon to protect them as well, for which it has ample facilities. There are 1,049 companies—one-half of them mutuals—authorized to do business in the commonwealth. Their total assets are now in excess of $126 billion. Annual net premiums written are equal to about $2 billion, a figure which has doubled during the past 10 years.

A further growth-sign is state revenue from insurance, currently around $28 million a year. That is an increase of some $6 million since Insurance Commissioner Francis R. Smith took office in 1955. Smith is the 19th commissioner of the state's insurance department, which was established in 1873. Under Smith's direction, insurance regulation is presently handled by five units—an administrative bureau, examinations bureau, bureau of rate regulation, licensing division and a liquidation division.

Commissioner Smith is currently the Zone 2 representative on the executive committee of the National Association of Insurance Commissioners and is a past chairman of the group's nonprofit hospital and medical service association committee. He is also chairman of the Pennsylvania Governor's Hospital Study Commission.

A native Philadelphian, Smith graduated in business administration from St. Joseph's College in 1933, and received an LLB degree from Temple University Law School in 1938. In 1941 he was appointed U. S. Marshal, and four years later was named collector of internal revenue for the Eastern District of Pennsylvania. In the latter position, he supervised 1,600 employees who processed some $1.7 billion in taxes annually. He left the revenue service in 1952, the year in which he was elected president of the U. S. Federal Business Association. ⊙

More commerce for the Port of Philadelphia will be forthcoming from 117 new industrial projects which Pennsylvania has launched.

*Delaware River Port Authority*